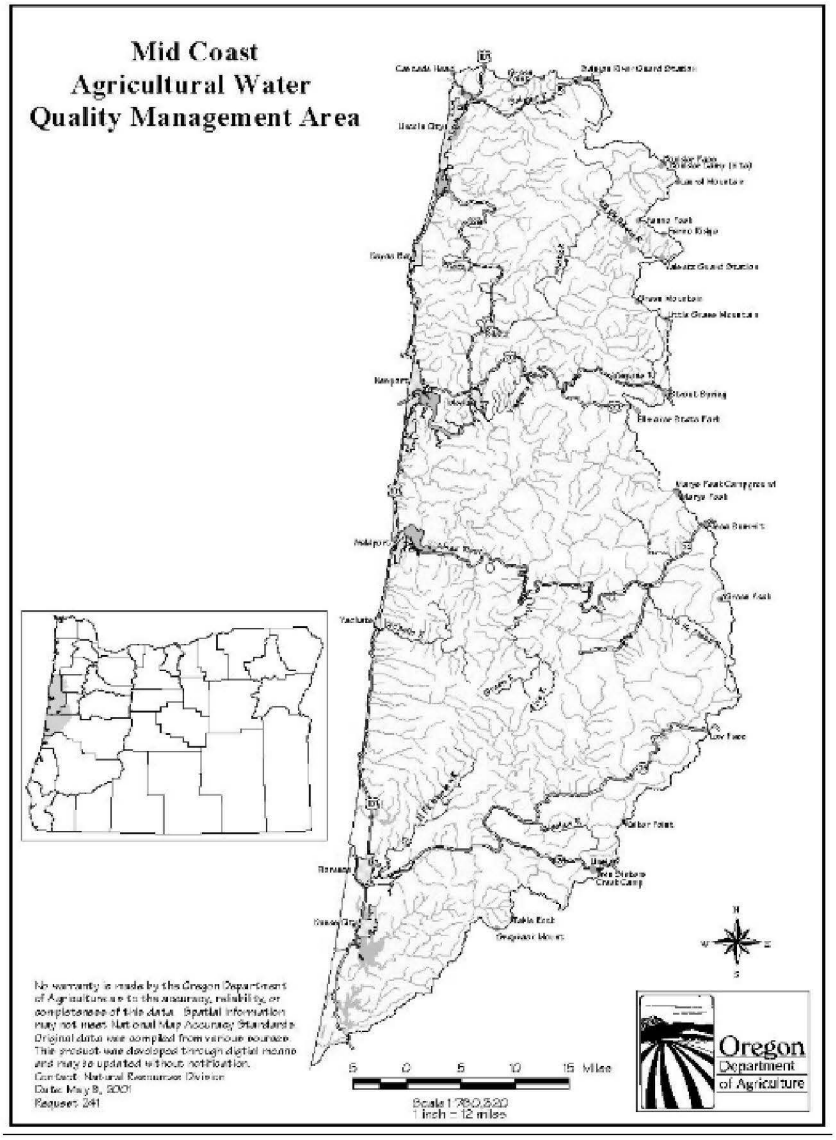
MID COAST AGRICULTURAL WATER QUALITY MANAGEMENT AREA PLAN AND RULES

BIENNIAL REVIEW REPORT TO THE OREGON STATE BOARD OF AGRICULTURE

May 20, 2008



I. Purpose

The Mid Coast Local Advisory Committee (LAC) is submitting this report to the Board of Agriculture to summarize implementation of the Mid Coast Agricultural Water Quality Management Area Plan (Area Plan) and Rules, as provided for in Oregon Administrative Rule (OAR) 603-090-0020 (4). This report summarizes the activities from the last biennial review to the present. (April 2004).

II. Introduction

The Mid Coast Area boundaries are the Coast Range Mountains to the east, the Pacific Ocean to the west, the Salmon River-Neskowin Creek watershed boundary to the north, and the Tahkenitch Lake-Smith River watershed boundary to the south.

The Area Plan and Rules were completed in September of 2002 by the LAC with the assistance of Oregon Department of Agriculture (ODA) and Lincoln and Siuslaw Soil and Water Conservation Districts (SWCDs). This group reconvened in April of 2004 to complete the first biennial review of the Area Plan and Rules and evaluate progress and effectiveness of the plan. Based on the information presented by the SWCDs and ODA, the LAC determined that, until new information becomes available, the Area Rules were adequate to prevent and control water pollution from agricultural activities.

The Oregon Department of Environmental Quality (DEQ) is required to submit a list of waterbodies that are water quality limited to the US Environmental Protection Agency every two years under section 303(d) of the Federal Clean Water Act. A number of waterbodies within the Mid Coast Area are water quality limited for one or more parameters, including temperature, dissolved oxygen, fecal coliform, E. coli, chlorophyll A, pH, sedimentation, and aquatic weeds or algae. Once a water body is listed, DEQ is responsible for developing a Total Maximum Daily Load (TMDL) for each water quality limited parameter. One reason the Area Plans and Rules were created is to assure agriculture can reasonably meet its load allocations. The load allocations are related to the TMDLs and based on parameters defined by the Oregon DEQ. One of the reasons the Area Plan and Rules were developed is to provide reasonable assurance that agriculture will meet its load allocations, when developed for given parameters defined by the Oregon DEQ, relating to the TMDLs.

III. Implementation of the Area Plan and Rules, April 2004 to Present

When developing the Mid Coast Area Plan and Rules, the LAC identified several objectives and strategies to protect and improve water quality influenced by agricultural practices. The LAC then developed rules to prevent pollution as close to the source as possible and prepare agricultural landowners to meet the load allocations in the TMDLs.

The Area Rules require landowners within the Mid Coast area to:

- Allow for the establishment and development of riparian vegetation consistent with site capability.
- Prevent nutrient applications that cause pollution to waters of the state.
- Prevent erosion in agricultural and rural areas where erosion may cause sediment runoff into waters of the state.
- Prevent pollution from irrigation return flow to waters of the state.
- Not violate any provision of ORS 468B.025 or ORS 468B.050.

The LAC identified several objectives and strategies in the Mid Coast Area Plan to improve water quality. Attachment A summarizes these objectives and strategies. Attachment A also outlines the accomplishments and progress towards achieving each objective since the last biennial review in April 2004.

IV. Compliance Investigations

Since the last biennial review ODA has investigated 14 compliance cases in the Mid Coast Area: one in 2004, one in 2005, seven in 2006, and five in 2007. All but two of the complaints were related to management of manure and riparian areas. The other two complaints were related to the application of shrimp casings and crab carcasses to agricultural fields. Results of the investigations were:

- Four letters of compliance
- Six water quality advisories
- Three letters of warning
- One site with no water quality issue identified

In October of 2006 the DEQ forwarded to ODA six anonymous complaints about management of streamside vegetation and livestock grazing of the riparian areas in the Beaver Creek Watershed. An initial drive-by investigation supported the complaints as meriting further investigation. Onsite investigations resulted in two water quality advisories, one letter of warning, and two letters of compliance. ODA has continued to work with those landowners who received either a water quality advisory or letter of warning. Follow-up visits resulted in two additional letters of compliance and one water quality advisory. ODA is currently in the process of working with this landowner.

In response to the complaints, ODA held a public meeting in February 2007, for agricultural landowners in the watershed, to explain the compliance process and discuss restoration opportunities. This meeting helped to open up several opportunities to work with landowners on water quality improvement projects. As a result, the Lincoln SWCD has worked with local landowners to develop several stream restoration proposals that may provide shade function and other improved riparian conditions.

The bottomlands of the Beaver Creek watershed are dominated by reed canary grass. Although areas dominated by reed canary grass can provide bank stability, they do not provide shade function as required in the Area Plan and Rules. This grass aggressively colonizes large areas and prevents most other vegetation from establishing. Therefore, determining the impact of agricultural activities on streamside vegetation can be difficult where reed canary grass is dominant.

V. Monitoring and Evaluation

Evaluation of the Area Plan's success involves several types of monitoring. These are:

- Baseline condition monitoring
- Trend monitoring
- Implementation monitoring
- Effectiveness monitoring

Baseline Condition and Trend Monitoring – What are current conditions and how are they changing?

Baseline condition monitoring provides a starting point for assessing water quality trends and land conditions. To evaluate the effects of the Area Plan and Rules, implementation partners must establish a picture of conditions prior to implementation.

Trend monitoring evaluates long-term changes in landscape conditions and water quality. In general, trend-monitoring activities are a continuation of baseline monitoring activities. Ideally, areas selected for baseline monitoring will also be used for trend monitoring.

To assess existing water quality conditions, ODA water quality staff review water quality data from the DEQ's Laboratory Analytical Storage and Retrieval (LASAR) database. In many cases, monitoring sites included in this database are adequate to track water quality in agriculturally influenced watersheds. In other cases, ODA staff may recommend additional monitoring sites that would be useful for tracking agriculture's effects on water quality.

ODA looks at all data for trends, but focuses on the parameters of concern for the specific subbasin.

ODA applies the following criteria to water quality data used for trend monitoring:

1) Monitoring stations must have at least partial influence from agricultural lands.
2) Data must not be older than 1985.
3) Data must be a continuous record of at least two years (the frequency of monitoring was not considered).
4) Data set ideally should include at least the following constituents:
    a) Total Suspended Solids
    b) Nitrate
    c) Ammonia
    d) E. coli or fecal coliform
    e) Total Phosphorus or orthophosphate
    f) Dissolved Oxygen, or Chemical Oxygen Demand/Biochemical Oxygen Demand
    g) pH

The above constituents are considered needed for tracking changes in water quality related to agricultural activities. Temperature is not included on this list because it is continuously monitored, rather than periodically like the parameters above, and because ODA expects changes in temperature to take place more slowly with changes in land conditions.

The Mid Coast Basin has scattered areas of agricultural development. This makes identifying particular sites for trend monitoring difficult, because it is hard to find stream reaches that represent large agricultural impacts. Though there are many monitoring stations listed on the LASAR database within this basin, only three of the sites appear to meet the necessary criteria for assessing agricultural impacts. These sites are the Salmon River at Otis, the Alsea River at Mike Bauer boat launch, and the Alsea River at Five Rivers Road.

The Salmon River at Otis is continuously monitored. Elevated concentrations of E. coli have been reported at this site, and as of February 2008, water quality conditions at the Salmon River monitoring site are showing an increasing trend in nitrate. This trend is apparent when looking at data from 1997 through 2007. Nitrogen as nitrate concentrations up to two milligrams per liter have been detected. The federal drinking water standard for nitrogen is 10 mg/L. Recent research by the U.S. EPA in the Salmon River basin indicates that increased alder density is the most likely cause of the increasing nitrate.

The Alsea River at Mike Bauer boat launch has been continuously monitored since 1993. Water quality data for the Alsea River at Mike Bauer boat launch does not show increasing trends in nitrate, though this

site does continue to have sporadically high E. coli concentrations.

The Alsea River at Five Rivers Road was monitored sporadically from 1985 through 1992. No water quality problems were apparent at this site. The Five Rivers Road site is very close to the Mike Bauer boat launch site.

Considering the scattered nature of agricultural development, the two continuously monitored sites described above are probably sufficient for characterizing agricultural impacts in the Mid-Coast Basin.

Summary of DEQ monitoring through Lincoln SWCD

In 2005, volunteer groups began monitoring water quality parameters within the Mid Coast Basin to collect data for the 303(d) listings and the TMDLs that are being developed. The following groups have been involved in collecting water quality data: Lincoln Soil and Water Conservation District, Siuslaw Watershed Council, Yachats Water Quality Monitoring Group, Salmon-Drift Creek Watershed Council, Yaquina Water Quality Monitoring Team, Beach Monitoring, Portland State University Monitoring, DEQ lab monitoring—Siuslaw, and DEQ lab monitoring—Alsea. Currently, there are 93 listings on the 303(d) list for the Mid Coast Basin. For a full list see appendix B of the Area Plan.

The monitoring for TMDL development in the Mid Coast Area was expanded to address the concerns raised by the LAC in previous versions of the Area Plan and to collect data related to water quality. This effort is collecting baseline data and may address questions from the monitoring objective in the Area Plan. DEQ expects that the TMDLs for the Mid Coast area will be finalized by 2010.

The baseline monitoring to support the TMDL is ongoing. However, one monitoring example has identified both bacteria and dissolved oxygen problems that DEQ indicates may lead to future listings on the 303(d) list for North and South Fork Beaver Creek. This important salmon stream has had dissolved oxygen values down to 1 mg/liter, which is not adequate to support aquatic life. The dissolved oxygen standard ranges from a high of 11 mg/liter for water bodies identified as salmon spawning to a low of 5.5 mg/liter for water bodies supporting warm water aquatic life.

Implementation monitoring – What is being accomplished?

Implementation monitoring tracks the conservation practices that have been implemented to benefit water quality. The local SWCDs and USDA Natural Resources Conservation Service (NRCS) track practices that have been implemented through quarterly reports to ODA and through an NRCS database. In addition, projects that have received funding from the Oregon Watershed Enhancement Board (OWEB) are tracked in OWEB's restoration database.

Attachment A outlines the implementation accomplishments in the Mid Coast Area since the last biennial review, organized according to the goals of the Area Plan.

Effectiveness monitoring – Are efforts protecting and improving water quality?

Effectiveness monitoring occurs at two scales. At a Management Area scale, land condition data are compared against water quality data over time to determine if

changes in land conditions are improving water quality. At a farm scale, projects can be evaluated to determine effects of management practices on water quality. ODA and the SWCDs will be able to conduct effectiveness monitoring once sufficient water quality data are collected and analyzed to characterize effectiveness.

VI. Mid Coast Area Plan and Rules Review Process

March 25, 2008

On March 25, 2008, the LAC met to review the progress and accomplishments of the SWCDs, and updates to the Area Plan and Rules, since their last meeting in April 2004. The following LAC members were present:

- Kevin Carroll
- Elmer Ostling
- Sally Owens
- Wayne Hoffman

This meeting began with a presentation from ODA staff, updating the LAC of the progress of the Agricultural Water Quality (AgWQ) Program and compliance issues that have been investigated since the last Area Plan review. The ODA presentation emphasized that the Program is goal oriented with a voluntary focus and uses enforcement as a last resort to meet the water quality rules. The AgWQ Program's focus areas are education and outreach, technical and financial assistance, biennial reviews, monitoring, and compliance. The main education and outreach campaign that applies in the Mid Coast Area is for streamside vegetation. There is a lot of work in the Mid Coast Area focusing on riparian restoration and management of riparian areas.

Following ODA's presentation, DEQ updated the LAC on monitoring efforts for development of TMDLs in the Management Area. On behalf of the Local Management Agency (LMA), ODA staff gave a presentation highlighting the work of the Lincoln and Siuslaw SWCDs since April 2004 (both SWCDs did not have technical staff at the time of this meeting). In addition, ODA staff gave a presentation and led discussion related to a series of compliance investigations in the Beaver Creek Watershed. Following the updates and discussion the remaining meeting time focused on review of the Area Plan and Rules.

ODA staff recommended several changes, updates, and removal of some text from the Area Plan. Most of the changes to the plan were minor edits. Among the changes are revised goals and objectives and updates to the 303(d) list of water quality limited water bodies in appendix B.

ODA staff recommended removing appendix J, "List of Pesticides and Map of Streams Affected by 2002 Pesticide Use Court Decision." It was recommended that this appendix be removed because the most up to date information related to this court decision is available on ODA's website. Pesticide information and reference to this website is in section 4.6 of the Area Plan.

ODA staff also recommended changing the title from section 4.1 from " Prevention and Control Measure: Near Stream Management Areas" to "Prevention and Control Measure: Temperature," and to remove the definition for near stream management area from this section. Near stream management areas are defined in Oregon Administrative Rule (OAR 603-095-0010) as "the area extending 25 feet as measured along the ground surface from the top of the streambank of a perennial stream or river, or the ordinary high water mark of a pond or lake." There

are two reasons that the ODA staff recommended changing the title and removing the definition: 1) the agricultural water quality rule should be outcome based rather than prescriptive, and 2) inclusion of this definition and title may limit the rule. For example, depending on the size of a stream, less than 25 feet of riparian vegetation may be adequate or more than 25 feet may be needed to provide the functions of shade, streambank stability, and filtering of nutrients. Also, the term "Near Stream Management Area" is in the title to the rule, but not in the rule itself. It was not meant to require a 25-foot shade buffer and makes the rule confusing. Lastly, in compliance cases, ODA does not apply the rule in this way; they rely on the language in the rule requiring site capable vegetation that will provide shade.

Discussions at the meeting focused on evaluation of the Area Rules and discussions of reed canary grass and other invasive plants in relation to compliance with the Area Rules. In certain cases a landowner may be in compliance with the riparian rule, but their property does not provide the desired functions, such as shade. This situation poses a challenge to ODA and local efforts to meet water quality standards. Further explanations pertaining to this have been added to the Area Plan.

The LAC was pleased with the efforts from the SWCDs to implement water quality projects and to monitor and collect water quality data. At the meeting most of the time was used for updates and discussions related to compliance issues. The LAC did not have enough time to review the Area Plan and Rules in as much detail as they would have liked at the March meeting. The LAC asked for an additional meeting to be scheduled for further discussion and that efforts be taken to ensure that more of the LAC members be in attendance at this meeting. A meeting was scheduled for May 20 to allow for further discussion.

LAC Member Status

There are several positions that are vacant on the LAC and need to be filled. The LAC may have up to twelve members, but after the March meeting there were only six appointed LAC members. After the March meeting, two of the alternate LAC members agreed to be appointed to the LAC and interviews were conducted to fill additional positions. Two additional LAC members were appointed after the interview process. Currently, there are ten individuals appointed to the LAC. The LAC would like to see continued efforts to find individuals to fill the two remaining positions on the LAC and also find alternates for the LAC in case a similar situation should arise in the future. The LAC would like to see these positions filled to allow for participation in future meetings.

May 20, 2008

The LAC met again on May 20, 2008, to determine exactly what they would like to report to the Board of Agriculture, discuss additional concerns related to the Area Plan, and determine if additional meetings needed to be held to update the Area Plan and Rules. The May 20th meeting discussion focused on approval of the updates to the Area Plan and report to the Board of Agriculture. The LAC then developed a schedule to discuss major topics and do an in-depth review of the Area Plan and Rules.

The following LAC members were present at the May 20th meeting:

- Roger Neff

- Betty Huff
- Wayne Hoffman
- Howard Pazdral
- Richard Huff
- Kevin Carroll
- Elmer Osling

VI. Recommendations for the Next Two Years of Implementation

After additional review of the Area Plan and Rules, on May 20, 2008, the LAC approved the changes to the Area Plan and report to the Board of Agriculture with the understanding that additional meetings will be held to further discuss each rule in detail with possible changes or additions to the Area Rules. The LAC chose to leave the "Near Stream Management Area" title and definition in the Area Plan until they have met for a full review of the text and rules related to riparian vegetation. The LAC decided to meet monthly, on the 4th Tuesday, starting in July 2008 to discuss the following topics:

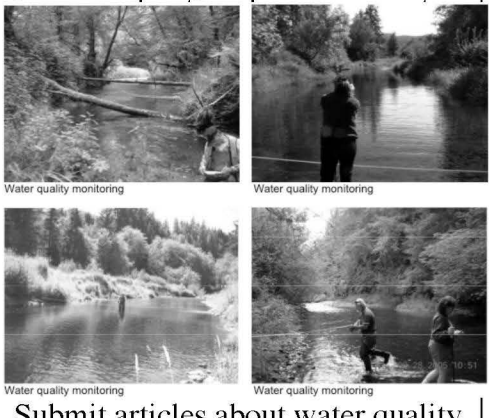
- Evaluation of effectiveness of the Area Plan and Rules in addressing pollution from agriculture.
- Near Stream Management Area, revision of the text and rules as needed.
- Site capability and invasive species related to compliance issues.
- Issues with near stream desired conditions and permitted channel maintenance and channelized conditions (Drainage Ditches and the Department of State Lands jurisdiction).
- Rules and Area Plan text related to nutrients, sediment, and bacteria (upland issues).
- Rules development (if needed),
- Wrap-up, review, and approval of changes by LAC.

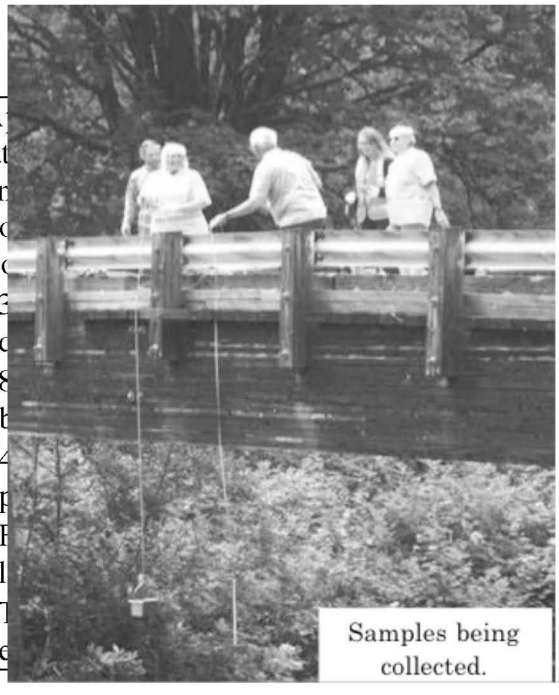
The goal of the LAC is to have a final updated plan and potential rule changes after six meetings and submit to the Board of Agriculture within nine months.

Attachment A. Summary of Area Plan Objectives and Strategies and Progress of Area Plan Implementation

Objective/Strategy	Progress
♦ Promote riparian conditions that prevent or reduce pollution from entering waters of the state. ♦ Maintain and where possible, improve the ability of riparian vegetation to develop or provide the following functions: filtration of nutrients, shade, and increased bank stability. ♦ Promote adequate vegetation for stream bank stability consistent with site capability. ♦ Encourage native vegetation in restored and managed riparian areas. ♦ Seek to control pollution as close to its source as possible. ♦ Promote prevention and control of nutrients, fine sediment, and bacteria loading from agricultural activities to waters of the state.  North Fork Yachats	Since April of 2004 the Mid Coast Area SWCDs have developed 17 conservation plans that cover approximately 1,350 acres, and implemented 86 water quality projects. There is a Fishers program through the Lincoln SWCD and the Siuslaw Watershed Council, funded by Oregon Watershed Enhancement Board to hire displaced fishers to work on riparian restoration projects. The following is a list of practices that were completed by the Lincoln and Siuslaw SWCDs and Mid Coast Watersheds Council: • 106.65 acres of riparian forest buffer • 85.4 acres of use exclusion • 14.4 acres of tree and shrub establishment • 35,000 feet of riparian fencing • 3 acres of heavy use area • 1 waste storage facility • 680 feet, plus 2 buildings with roof runoff installed • 1.75 miles of fish stream improvement • 1 off channel watering facility • 200 feet of subsurface drain • 12 acres of restoration and management of declining habitat • 350 feet of streambank stabilization • 24 acres of riparian release • 3 acres of nutrient management • 101.3 acres of pest management • 66.7 acres of brush management

Objective/Strategy	Progress
♦ Encourage control of invasive vegetation through outreach, technical assistance, and incentives.	♦ Both SWCDs have established knotweed control programs and are working with landowners in both counties to control knotweed. Siuslaw SWCD is also working on gorse and English ivy control. ♦ Lincoln SWCD knotweed control program: 2004-treated 104 sites, total of 5 acres 2005-treated 250 sites, total of 9 acres 2006-treated 290 sites, total of 11.62 acres
♦ Support monitoring of water quality in the Mid Coast basin, including monitoring that addresses the following questions: – What are sources of pollution in the Mid Coast watersheds? – What are trends in levels of bacteria, nutrients, sediment, temperatures, and other parameters of concern, in Mid Coast watersheds? – When do seasonal peaks occur in parameters of concern? – How do different land uses contribute to water quality concerns? – What are groundwater quality trends? – How do biosolids applications on agricultural lands affect water quality?	♦ ODA is reviewing existing water quality monitoring data and sites. Data and sites meeting ODA's criteria will be analyzed for water quality trends and this information will be shared with the LAC when the review is complete. Additional sites will also be recommended if necessary. ♦ EPA is currently working on research related to how biosolid applications on agricultural lands affect water quality. ♦ Monitoring being led by DEQ and the Lincoln SWCD to coordinate collection, analysis, and assembly of data for the development of temperature, bacteria and dissolved oxygen TMDLs for the Mid Coast area. TMDLs are expected in 2009.
♦ Conduct the following education and outreach activities: – Host meetings about water quality – – – – Submit articles about water quality	Since A and Wat landown variety several • 3 • 8 • 4 • E • T




Samples being collected.

Objective/Strategy	Progress
issues and optional management practices to local publications. – Provide information to landowners about the area plan and rules when delivering technical assistance. – Post fliers and newsletters about water quality issues in local feed stores. – Promote financial benefits of water quality improvement activities. – Provide information about federal and local cost-sharing programs to landowners on an ongoing basis. – Send out information to high school natural resource groups about agriculture and the water quality plan and rules.	Outreach/education activities included workshops, presentations, demonstrations, tours, displays, and educational classes.
♦ Help make cost-share programs less cumbersome for landowners either by helping them with paperwork and other steps, or reducing paperwork required to participate.	Since April of 2004, Mid Coast Area SWCDs and Watershed Councils have applied for and secured funding from ODA, Oregon Watershed Enhancement Board, Oregon Department of Environmental Quality, the Natural Resources Conservation Service, the Bureau of Land Management, the Siuslaw Stewardship Fund and the United States Forest Service.